

REVIEW OF RESEARCH CHALLENGE PROGRAMS AND PROGRAMS OF DISTINCTION

**Agenda Item C-3
January 24, 2000**

Information:

The Council-approved guidelines for the Research Challenge Trust Fund and the Regional University Excellence Trust Fund require the Council to assess at least once every two years the academic and financial performance of the programs supported by these trust funds. The Council staff in fall 1999 reviewed the following programs:

- University of Kentucky Research Challenge programs (approved by the Council, May 18, 1998): gerontology, advanced medical, clinical pharmaceutical, molecular mechanisms of toxicity, computer science and electrical engineering, materials synthesis, plant sciences, biological chemistry, management and economics, psychology of substance abuse, geography, and the graduate student support initiative.
- University of Louisville Research Challenge programs (approved May 18, 1998): early childhood, entrepreneurship, logistics and distribution, and molecular medicine and biotechnology.
- Western Kentucky University Program of Distinction in Applied Research and Technology (approved July 13, 1998).
- Murray State University Program of Distinction in Telecommunications Systems Management (approved July 13, 1998).
- Eastern Kentucky University Program of Distinction in Justice and Safety (approved July 13, 1998).
- Morehead State University Program of Distinction, the Institute for Regional Analysis and Public Policy (approved January 25, 1999).
- Northern Kentucky University Program of Distinction, the Center for Integrative Natural Science and Mathematics (approved March 15, 1999).

On each campus, Council staff met with representatives from the President's or Provost's Office, with deans and faculty, with students, and with financial officers. This review did not include the endowed chairs and other initiatives created by the Endowment Matching Program funded by the 1998 General Assembly. The Kentucky State University Program of Distinction in Aquaculture was not reviewed because it had just been approved at the September 27, 1999, Council meeting.

Summary Conclusion: All institutions appear to be making satisfactory progress toward the early-stage goals approved by the Council in each individual Research Challenge and Program of Distinction proposal. It is too early to make definitive statements about performance because most of the first major milestones come at the end of the current academic year -- and for some, not before 2001 or even later. The Council staff will continue to assess each program created through the trust funds named above, even when

the program is included in the institutional base budget as proposed in the Council's 2000-2002 budget recommendation. The Council staff will review the programs again in fall 2000.

On each campus, there is a palpable sense of excitement about the Research Challenge programs and the programs of distinction, about the possibility of achieving national prominence in selected areas, and of building teams to solve problems for and with the support of the state's taxpayers. For example, professors explained how laboratory equipment purchased with program funds would be used in projects with Kentucky industrial and community partners, and students stated that they chose to attend a Kentucky institution because of program-funded scholarships. We were struck by the multidisciplinary promise of the programs, by the efforts made to include students in research, and by institutional awareness that each program must ultimately provide direct economic benefit to the Commonwealth.

Each institution provided evidence that it has identifiable tracking of budgeted and expended items for its Research Challenge program or program of distinction and that the trust fund support for the program is matched dollar for dollar either from external funds or internal resources.

Research Challenge Trust Fund Programs at the University of Louisville and the University of Kentucky: Using the Research Challenge money, UofL and UK have moved swiftly to increase the number of nationally recognized faculty and graduate students and to purchase equipment necessary for nationally recognized research. Our review moved beyond description of these inputs to a discussion of how best to measure productivity and economic impact. The Research Challenge programs include a wide variety of assessment criteria, but it is difficult to compare results both across programs and with benchmark institutions because there are few standard measures. Moreover, few of the criteria directly address the prospects for commercial application of the research. The Council staff will continue to work with UofL and UK to create consolidated and standard measures, to compare those measures with their benchmark institutions, and to link the Research Challenge programs even more closely to the institutions' management of intellectual property. Both institutions confirmed their desire to measure and report their Research Challenge research and development using measurements satisfactory to the Council. Council staff members are scheduled to meet separately with the Vice Presidents for Research at UK and UofL in late January about these topics and expect to make a follow-up report to the Council in March. Representatives of UofL and UK will briefly present the status of their Research Challenge programs at the March Council meeting.

Programs of Distinction at Western Kentucky University, Murray State University, Eastern Kentucky University, Morehead State University and Northern Kentucky University: The comprehensive universities have also moved quickly to establish their programs of distinction. All five institutions are tackling similar organizational issues as they do so, and on each campus there is some uncertainty about the role and structure of

the new program. Senior administrators and program faculty are experimenting with curricula, logistics, personnel policies, student involvement and community outreach. The core concern is how best to combine previously separate units into a cohesive whole, and how to create a forum for the interdisciplinary collaboration envisioned by the program of distinction proposals. For example, in most cases a center has been set up to coordinate the program of distinction, and a center director has been or will be appointed, sometimes after a national search. Center directors and faculty are asking the following questions. What role should the center director play? What is the relationship of the center to the sub-programs it houses (and of the sub-programs to one another), to the traditional departments from which center faculty come, and to departments whose faculty are not now involved in the program of distinction? Should faculty be tenured to the center? Council staff will in future reviews evaluate how effective each institution's solutions are relative to institutional needs and to the overall goals of the incentive trust fund for the comprehensive universities.

The universities should make student recruiting into the programs of distinction a high priority, especially for minority and female students. There is a particular urgency here because minority and female students are under-represented in the sciences, and all the programs of distinction have a strong science component. It is not clear in most cases how program of distinction students will be mentored as a special group, or whether such differentiation is always desirable. The universities need to think more about how to integrate the programs of distinction into existing high school-university cooperative arrangements. They also need to make sure that students in programs of distinction regularly participate in national conferences and competitions such as the National Conference on Undergraduate Research.

The universities should promote the programs of distinction to the public, especially to the national audience, more aggressively and more consistently than they have so far. Attaining national distinction means increased awareness of out-of-state competition. It might be possible to market the programs of distinction as a package, assuming some cooperation among the programs. For instance, a Kentucky Consortium of Excellence could establish links to national industrial associations or employers' groupings. The programs of distinction should also work closely with the Kentucky Commonwealth Virtual University as perhaps the most cost-effective means of reaching a national audience. National experts should be included on the external advisory boards that most of the programs of distinction will establish.

Assessment criteria also need further specification, especially in setting baselines and in measuring economic impact. Some program of distinction faculty seemed to know little about their benchmark institutions. We encourage program of distinction faculty to study their benchmark institutions so that Kentucky's comprehensive universities become best-in-class nationally.

There are no "one size fits all" solutions to the concerns raised above, but some options will be preferable to others. To foster the sharing of models and best practices, the Council staff plans to hold a meeting this spring of program of distinction directors

coinciding with a Council of Chief Academic Officers gathering. Representatives of Morehead State University, Eastern Kentucky University, and Murray State University will briefly present the status of their programs of distinction at the January Council meeting. Representatives of Northern Kentucky University and Western Kentucky University will do the same at the March Council meeting.